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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/938,196 | 08/23/2001 | Warren P. Porter | Warf-002 | 1156 |
| 22224 | 7590 | 06/20/2006 | EXAMINER | |
| PATRICIA SMITH KING 10 E. DOTY STREET, STE. 800 MADISON, WI 53703 | | | STEVENS, THOMAS H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2123 | |

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/938,196 | PORTER ET AL. |
| | Examiner Thomas H. Stevens | Art Unit 2123 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 February 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-93 is/are allowed.
- 6) Claim(s) 94-96 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 October 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-98 were previously examined.
2. Claims 97 and 98 were cancelled.
3. Claims 1-96 were examined.

Section I: Objections

Claims

4. The examiner has provided a number of examples of claim deficiencies, which may not be inclusive. In this instance, the limitations in these claims are not previously mentioned within the body of the claim that could create an antecedent problem:

- Clam 94, line15, states “the set of microclimate conditions and “ the set of animal characteristics”; the Office suggest deleting the article “the” in both instances.

Applicants should refer to these issues as examples and initiate all the necessary corrections to eliminate the claim objects. The claims have been treated on their merits as best understood by the examiner.

Specification

5. On page 10, line 12, the disclosure refers to figure 1 elements 300 and 500 that are not on figure 1 but are described on figure 2.
6. Page 52, line 29 states “animal characteristics data 190” ; however figure 2 states “animal characteristics” as 170.

Appropriate action is requested.

Drawings

7. The drawings are objected to under 37 CFR 1.83(a) because they fail to show elements 120, 190 and 540 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 94-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al., "Endotherm Energetics: from a Scalable Individual-based Model to Ecological Applications" (hereafter Porter) in view of Grant et al., "Modeling Global Macroclimatic Constraints on Ectotherm Energy Budgets" (hereafter Grant).

Porter teaches a computer model of heat and mass transfer through flesh, fat and porous fur for endotherms of any dimensions, but fails to teach the solar radiation to enable the calculation of an input of solar radiation when the sun is above the horizon and when the sun is below the horizon.

Grant teaches the solar radiation to enable the calculation of an input of solar radiation when the sun is above the horizon and when the sun is below the horizon.

Both pieces of art are analogous since they both teach microclimatic animal modeling.

Therefore it would have been obvious to having ordinary skill in the art at the time of invention was made to utilize the hypothetical perching location, body posture and solar orientation of Grant in the ecological model of Porter since Grant teaches methods that are likely to exceed the capabilities of any individual laboratory in terms of labor, logistics (pg. 173, right column, 2nd paragraph, lines 6-9).

Claim 94. A method for calculating an at least one effect of a plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)on an animal (Porter: abstract) , comprising: providing an at least one server computer (Porter: abstract) in communication with a computer (Porter: abstract) network; providing input to the server comprising the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)data and a plurality of animal (Porter: abstract) characteristics data; processing the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)data and the plurality of animal (Porter: abstract)

characteristics data by the server, comprising: translating the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4) into a plurality of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph) experienced by the animal (Porter: abstract), by running a microclimate model; solving for a set of animal (Porter: abstract) conditions, by running an animal (Porter: abstract) model using the set of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph) and the set of animal (Porter: abstract) characteristics; and, generating output from the server, comprising the set of animal (Porter: abstract) conditions.

Claim 95. A method for calculating an at least one effect of a plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4) on an animal (Porter: abstract) , comprising: providing at least one server computer (Porter: abstract) in communication with a computer (Porter: abstract) network, the at least one server computer (Porter: abstract) hosting a microclimate model and an animal (Porter: abstract) model, and providing a graphical user interface (well-known in computers) whereby a user may input conditions for use by the microclimate and animal (Porter: abstract) models; providing input to the server comprising the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4) data and a plurality of animal (Porter: abstract) characteristics data; processing the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4) data and the plurality of animal (Porter: abstract) characteristics

data by the server, comprising: translating the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4) into a plurality of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph) experienced by the animal (Porter: abstract) , by running the microclimate model; solving for a set of animal (Porter: abstract) conditions, by running the animal (Porter: abstract) model using data from the set of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph) and the set of animal (Porter: abstract) characteristics; and, generating output from the server (well-known in computers) , comprising the set of animal (Porter: abstract) conditions.

Claim 96. A method for calculating an at least one effect of a plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)on an animal (Porter: abstract) , comprising: providing at least one server computer (Porter: abstract) in communication with a computer (Porter: abstract) network, the at least one server computer (Porter: abstract) hosting a microclimate model and an animal (Porter: abstract) model, and providing a graphical user interface whereby a user may input conditions for use by the microclimate and animal (Porter: abstract) models; providing input to the server comprising the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)data and a plurality of animal (Porter: abstract) characteristics data; processing the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)data and the plurality of animal (Porter: abstract) characteristics data by the server,

comprising: translating the plurality of environmental conditions (Porter: pg.127, 4th paragraph, line 4)into a plurality of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph)experienced by the animal (Porter: abstract) , by running the microclimate model; solving for a set of animal (Porter: abstract) conditions, by running the animal (Porter: abstract) model using data from the set of microclimate conditions (Grant: abstract; and Porter pg.127, 4th paragraph)and the set of animal (Porter: abstract) characteristics; generating output from the server, (well-known in computers) comprising the set of animal (Porter: abstract) conditions; and, displaying output from the server to the user via the graphical user interface (well-known in computers).

Allowable Subject Matter

11. Claims 1-93 are allowable.
12. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

While Porter teaches (claims 1 and 36) a method of using a computer for calculating an at least one effect of a plurality of environmental conditions on an animal, using said computer to perform the following steps comprising: providing a data set of the plurality of environmental conditions for an at least one locality: Grant teaches (claims 1 and 36) during an at least one time interval; providing a data set of characteristics of the animal ; translating the set of environmental conditions data into a set of microclimate conditions experienced by the animal, by running a microclimate

model to generate values for the set of microclimate conditions using the set of environmental conditions data and the set of animal characteristics data, the microclimate model comprising a solar radiation model to enable the calculation of an input of solar radiation when the sun is above the horizon and when the sun is below the horizon; and, solving for a set of animal conditions by running an animal model using the set of microclimate conditions and the set of animal characteristics, for each of the at least one time intervals at each of the at least one localities, the set of animal conditions comprising an amount of discretionary energy and a total activity time of the animal; Porter teaches (claims 36 and 70) calculating an amount of metabolic heat generation required to maintain a core temperature of the animal and noting an activity state of the animal by performing a heat balance analysis, the activity state being chosen from the group consisting of active and non-active by performing a mass balance analysis using the calculated amount of metabolic heat; Porter and Grant teach (claim 70) a method of using a computer at least one effect of a plurality of microclimate conditions, none of these references, taken either alone or in combination, with the prior art of record disclose:

(claims 1,36 and 70) "solving for a set of animal conditions...The set of animal an amount of discretionary water available to the animal,"

(claim 36 and 70) "calculating the amount of discretionary energy available...generation performing the mass balance analysis comprising running a gut model coupled to a lung model,"

in combination with the remaining elements and features of the claimed invention. It is for these reasons that the applicants' invention defines over the prior art of record.

Section III: Response to Applicants Remarks

37 CFR 1.105

13. The Office acknowledges the request.

Drawings

14. Applicants are thanked for responding to this issue; however, they're issues still outstanding based on this examination.

101

15. Applicants are thanked for addressing this issue. Rejection is withdrawn.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (8:00 am- 4:30 pm EST).

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Paul Rodriguez 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

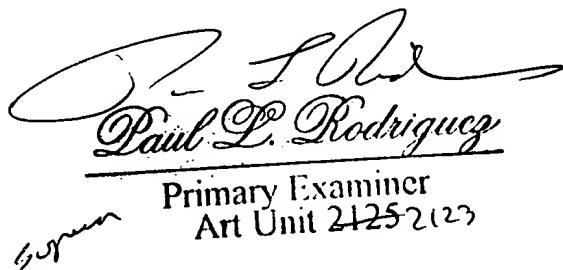
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).

June 3,2006

TS


Paul L. Rodriguez 6/9/06
Primary Examiner
Art Unit 2123